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EXAMINER	
OBERLY, ERIC T	
ART UNIT	PAPER NUMBER
2184	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/572,934	WITTMER, DETLEV	
	Examiner	Art Unit	
	ERIC T. OBERLY	2184	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-12* is/are pending in the application.

4a) Of the above claim(s) *1-6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 December 2007* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/8/2007, 3/22/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to applicant's communications filed February 8, 2007 with pre-examination claim amendments.

Claims 1-6 have been cancelled, and claims 7-12 have been added. As a result, claims 7-12 are now pending in this application.

Information Disclosure Statement

The information disclosure statement filed 3/22/2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

The drawings are objected to because terms "MemoCal", "MemoSave" and "CDI" appearing in Figure 3, and the terms "MemoSave" and "CDI (MemoDI)" appearing in Figure 2, and the terms "MemoStic", "MemoSave", and "MU-Data" appearing in Figure 3, are not sufficiently explained by the drawing or defined in the Specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version

of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: The acronym, CDI, is used on line 16 of page 2 and lines 1 and 30 of page 3. The acronym is not spelled out or sufficiently described.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 11, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8, lines 7 and 9, the term represented by the acronym CDI is neither spelled out nor defined in the claim or Specification. For examining purposes it has been interpreted as an interface between an intrinsically safe and a non-intrinsically safe location.

Claim 8, line 8, the abbreviation Ex-barrier is neither spelled out nor defined in the claim or Specification. For examining purposes it has been interpreted to represent the term Explosion Barrier, which has been interpreted as a barrier between a hazardous and non-hazardous area.

Claim 11, line 7, the abbreviation Ex-barrier is neither spelled out nor defined in the claim or Specification. For examining purposes it has been interpreted to represent the term Explosion Barrier, which has been interpreted as a barrier between a hazardous and non-hazardous area.

Claim 12 is rejected due to dependence on claim 11.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Behrens et al. US Patent # 6037857.

Referring to claim 8, Behrens teaches a method for safe data transfer between an intrinsically safe sensor (col. 1, lines 29-31) and a non-intrinsically safe computer unit (Industrial Controller; col. 1, line 15)), comprising the steps of: converting analog measured values into digital measurement data in a sensor-module of the sensor (col. 7, lines 35-37); transferring the digital measurement data to a sensor-module head of the sensor via a galvanically decoupled transfer path (isolator 48 provides galvanic isolation; Fig. 3, col. 5, lines 60-62), and further to a calibration unit (processor; col. 7, lines 40-41); transferring the measurement data from the calibration unit to an interface CDI (penetration circuit; col. 8, line 50), which is embodied as an Ex-barrier (intrinsically safe penetration circuit; col. 8, lines 50-52); and transferring the measurement data from the interface CDI to the computer unit via a standard interface provided at the computer unit (col. 3, lines 35-45).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behrens et al. US Patent # 6037857 in view of Mancini et al. US Patent # 6583982.

Referring to claim 7, Behrens teaches method for safe data transfer between an intrinsically safe sensor (col. 1, lines 29-31) and a non-intrinsically safe computer unit (Industrial Controller; col. 1, line 15), comprising the steps of: converting analog measured values into digital measurement data in a sensor-module of the sensor (col. 7, lines 35-37); transferring the digital measurement data to a sensor-module head of the sensor via a galvanically decoupled transfer path (isolator 48 provides galvanic isolation; Fig. 3, col. 5, lines 60-62), and further to a calibration unit (processor; col. 7, lines 40-41); saving the measurement data to a portable storage medium which is separable from the calibration unit; transporting the storage medium in a separated state to the computer unit; connecting the storage medium with the computer unit; and transferring the measurement data to the computer unit via a standard interface provided at the computer unit.

Behrens does not appear to explicitly disclose saving the measurement data to a portable storage medium which is separable from the calibration unit; transporting the storage medium in a separated state to the computer unit; connecting the storage medium with the computer unit; and transferring the measurement data to the computer unit via a standard interface provided at the computer unit.

However, Mancini discloses saving the measurement data (data collected) to a portable storage medium (core computer) which is separable from the calibration unit (col. 3, lines 46-50); transporting the storage medium in a separated state to the computer unit (col. 3, lines 34-35); connecting the storage medium with the computer

unit (col. 3, lines 35-36); and transferring the measurement data to the computer unit via a standard interface provided at the computer unit (col. 3, lines 36-38).

Behrens and Mancini are analogous art because they are from the same field of endeavor, intrinsically safe data collection and transmission.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Behrens and Mancini before him or her, to modify the industrial controller system of Behrens to include the removable computer core of Mancini so that data may be safely collected and removed for use in a non-intrinsically safe environment

Behrens suggests a circumstance in which the entire industrial controller is contained inside a hazardous area (see Behrens, Fig. 2, col. 5, lines 40-46), a person having ordinary skill in the art would be motivated to provide a removable storage medium such as the core computer of Mancini so that data collected within the hazardous area maybe safely removed for use in a non hazardous area.

Therefore, it would have been obvious to combine Behrens with Mancini to obtain the invention as specified in the instant claim.

Referring to claim 11, Behrens teaches method for safe data transfer between an intrinsically safe sensor (col. 1, lines 29-31) and a non-intrinsically safe computer unit (Industrial Controller; col. 1, line 15), comprising the steps of: converting analog measured values into digital measurement data in a sensor-module of the sensor (col. 7, lines 35-37); and transferring the digital measurement data to a sensor-module head

of the sensor via a galvanically decoupled transfer path (isolator 48 provides galvanic isolation; Fig. 3, col. 5, lines 60-62), and further to a plug-in module of the computer unit, with the plug-in module being embodied as an Ex-barrier.

Behrens does not appear to explicitly disclose transferring the data further to a plug-in module of the computer unit, with the plug-in module being embodied as an Ex-barrier.

However, Mancini discloses transferring the data further to a plug-in module of the computer unit (col. 3, lines 46-50), with the plug-in module being embodied as an Ex-barrier (col. 3, lines 18-22).

Behrens and Mancini are analogous art because they are from the same field of endeavor, intrinsically safe data collection and transmission.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Behrens and Mancini before him or her, to modify the industrial controller system of Behrens to include the plug-in computer core of Mancini so that data maybe safely collected and removed for use in a non-intrinsically safe environment.

Behrens suggests a circumstance in which the entire industrial controller is contained inside a hazardous area (see Behrens, Fig. 2, col. 5, lines 40-46), a person having ordinary skill in the art would be motivated to provide a plug-in module such as the core computer of Mancini so that data collected within the hazardous area maybe safely removed for use in a non hazardous area.

Therefore, it would have been obvious to combine Behrens with Mancini to obtain the invention as specified in the instant claim.

Claims 9, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behrens et al. US Patent # 6037857 in view of Mancini et al. US Patent # 6583982 as applied to claims 7 and 11 above, and further in view of Barros De Almeida et al. US Patent # 6839790.

As to claim 9, Behrens in view of Mancini does not appear to explicitly disclose the standard interface at the computer unit is a USB-interface.

However, Barros De Almeida teaches the standard interface at the computer unit is a USB-interface (a host having a Universal Serial Bus (USB) port; col. 4, line 9).

Behrens, Mancini and Barros De Almeida are analogous art because they are from the same field of intrinsically safe data collection.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Behrens in view of Mancini and Barros De Almeida before him or her, to use a computer unit with an USB interface as taught by Barros De Almeida.

Behrens anticipates a serial network port (see Behrens; col. 3, line 38); a person having ordinary skill in the art would be motivated to incorporate a USB interface because it has become an industry standard in serial interfaces.

Therefore, it would have been obvious to combine Behrens in view of Mancini with Barros De Almeida to obtain the invention as specified in the instant claim.

As to claim 10, Behrens in view of Mancini does not appear to explicitly disclose the data transfer between the sensor and the calibration unit occurs with a proprietary protocol in accordance with the RS485 standard.

However, Barros De Almeida teaches data transfer between the sensor and the calibration unit occurs with a proprietary protocol in accordance with the RS485 standard (col. 5, lines 44-46).

Behrens, Mancini and Barros De Almeida are analogous art because they are from the same field of intrinsically safe data collection.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Behrens in view of Mancini and Barros De Almeida before him or her, to transmit signals between field components in accordance with RS485 as taught by Barros De Almeida.

Behrens anticipates an intrinsically safe serial communication employing a high data rate suitable for the control of many control points within a hazardous area (see Behrens; col. 9, lines 50-55); a person having ordinary skill in the art would be motivated use a protocol in accordance with RS485 as taught by Barros De Almeida as RS485 is a well known serial communication standard which offers high data transmission speeds.

Therefore, it would have been obvious to combine Behrens in view of Mancini with Barros De Almeida to obtain the invention as specified in the instant claim.

As to claim 12, Behrens in view of Mancini does not appear to explicitly disclose the plug-in module is a PCMCIA plug-in card.

However, Barros De Almeida teaches the plug-in module is a PCMCIA plug-in card (col. 1, lines 65-67).

Behrens, Mancini and Barros De Almeida are analogous art because they are from the same field of intrinsically safe data collection.

At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Behrens in view of Mancini and Barros De Almeida before him or her, implement the plug-in core computer as taught by Behrens in view of Mancini as a PCMCIA connection as taught by Barros De Almeida as background in the field of the art.

Mancini discusses the concept of transferable computer cores as a module containing some essential components of a computer, but lacking any usable interface (see Mancini; col. 1, lines 50-56); as PCMCIA cards, also commonly known as PC Cards, are widely used in the computer industry since their creation in 1991, a person having ordinary skill in the art would be motivated to use such a common standard to implement the transferable core computer as described by Mancini.

Therefore, it would have been obvious to combine Behrens in view of Mancini with Barros De Almeida to obtain the invention as specified in the instant claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC T. OBERLY whose telephone number is (571)272-6991. The examiner can normally be reached on Monday - Friday 7:30 - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Henry Tsai can be reached on (571) 272-4176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. T. O./
Examiner, Art Unit 2184

/Henry W.H. Tsai/
Supervisory Patent Examiner, Art Unit 2184